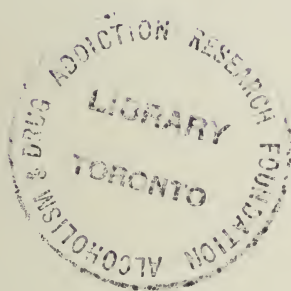


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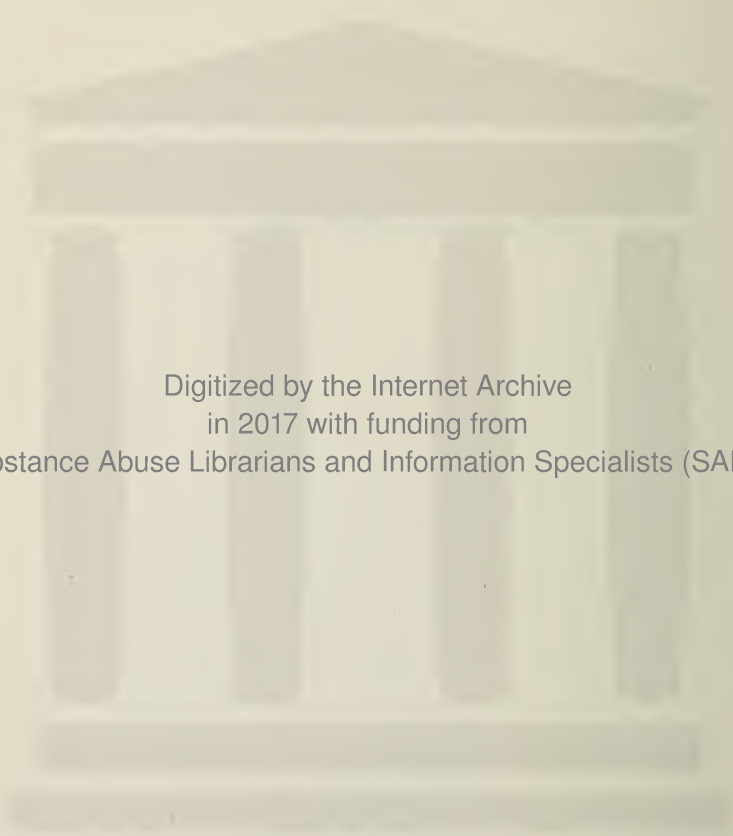
CHRONIC ALCOHOLISM

R. J. GIBBONS

ALCOHOLISM RESEARCH FOUNDATION



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CHRONIC ALCOHOLISM
AND
ALCOHOL ADDICTION

A Survey of Current Literature

By

R. J. GIBBINS

With the assistance of

B. W. HENHEFFER and A. RAISON

*Department of Psychology, Queen's University,
Kingston, Ontario*

ALCOHOLISM RESEARCH FOUNDATION

1953

*Printed in Canada, 1953, for
Alcoholism Research Foundation
9 Bedford Road, Toronto
by University of Toronto Press*

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INTRODUCTION

DEFINITIONS of chronic alcoholism and alcohol addiction found in the scientific literature are not as confused and diverse as they might at first appear. It is only outside of the strictly scientific literature that disagreement on their criteria becomes obtrusive. In general such confusion as does occur is due not so much to differences in criteria as differences in terminology. A common and particularly undesirable practice is that of equating the terms "chronic alcoholism" and "alcohol addiction" or of using them interchangeably. In the scientific literature, chronic alcoholism is defined with great agreement as the physical and psychological changes following the excessive and prolonged use of alcoholic beverages. These changes are well known and can be diagnosed in any individual case. Alcohol addiction is defined as an uncontrollable craving for alcohol. The outstanding criterion is the inability to break with the habit. In practice, however, it is not always possible to make the distinction between the two conditions, for the addiction usually turns into chronic alcoholism. The expression "alcoholism" without the qualifying adjective "chronic" has been widely used in scientific literature to denote the excessive use of alcohol and in propagandistic literature to cover even moderate drinking. The term will be avoided here entirely since such usage conflicts with the definition of chronic alcoholism.

Addicts may be differentiated into two main types. Some individuals are called primary or true addicts to distinguish them from those who become addicted to alcohol after long association. The true addict suffers from addiction at the very beginning of his use of alcohol and his drinking habits are endogenously determined, arising from within the personality structure. The primary or true addicts are not a single type, but a group of types with the common characteristic that alcohol is a definite need for them, that it has a definite function in their scheme of things, and that their dependence on the intoxicant and their inability to give it up are not determined by habit or physiological processes. These characteristics distinguish them from the secondary addicts, who have developed a physiological and ultimately also a psychological need in the process of habituation, but in whose management of life alcohol has not played an essentially dominant role. Secondary addicts do not form a group in the sense that the true

addicts form one, since their addiction is only a developmental stage which may be reached by any habitual drinker.

We are interested, however, not only in those individuals who are unable to give up alcohol (i.e. the addicts), but also in the more numerous abnormal drinkers all of whom are potential secondary addicts. Abnormal drinking has been formulated as habitual indulgence in alcoholic beverages, beyond the limits of merely satisfying thirst, or using them in the sense in which a condiment is used or as an occasional relaxant, or of their formal social use.

The classification of abnormal drinkers, in common with the classification of other behaviour disorders, suffers from a complexity of types, with virtually every writer on the subject applying a different method.

Bowman and Jellinek (1941), although they were impressed by the diversities of classification appearing in the literature, did not consider this variation a sign of confusion or conflict. On the contrary, they felt that these different classifications are by no means mutually exclusive but that each one of them has a definite meaning and utility and can be integrated into a system of subordination and co-ordination. The result of their efforts is a classification schedule which appears to be more complete and meaningful than any other encountered in the literature thus far, providing the largest number of concretely described categories of drinker types.

Flock (1942), applying the Bowman-Jellinek Schedule to a sample of 274 abnormal drinkers, found it to be a useful and meaningful instrument for the differentiation of various classes of abnormal drinkers. More recently this schedule has been modified and expanded by Jellinek, so that the names of some of the existing categories have been changed and additional categories added.

Scattered throughout the literature one finds descriptions of drinker types which are not arranged into formal classificatory systems. These descriptions are generalizations based upon the clinical impressions of observers of broad experience and varying degrees of insight. Representative of this form of study is Myerson's (1943) description of drinker types seen at a Boston Army Induction Centre.

A disturbing element in such impressionistic observation is that, as a rule, the psychologist or psychiatrist has a limited, even a biased experience with inebriates, and that he tends, as a rule, to describe abnormal drinkers in general in the light of his limited experience. Thus while impressionistic descriptions of drinker types are a valuable contribution, caution must be exercised as to the wideness and validity of their application.



I. ETIOLOGY

By the etiology of alcohol addiction, the causes leading to an irresistible craving for the effects of alcohol should be understood. However, the question is usually formulated in a much broader sense, to examine the causes which lie behind habitual excessive indulgence in alcoholic beverages.

Etiological theories usually consider one or more of the following: physiology, personality, heredity and constitution, psychotic or psychopathic tendencies, the emotional situation, and environmental factors such as occupation and the drinking habits of the community. The molar effect, or the effect of alcohol on the total person is also an element to be considered in the etiology of the drinking habit.

Physiological Views

In attempting to account for the genesis of alcohol addiction in terms of physiological processes, many writers end up by describing and explaining the physiological mechanisms of the release of inhibitions through alcohol. These are no doubt important contributions, but the processes so described can in no way be counted as the full etiology.

There are however, other physiological theories which come closer to being etiological, although they do not deal with the initial factors which start the process, but rather explain the genesis of one of its stages. These theories relate to the process of habituation which makes the individual physically dependent upon alcohol. This physical dependence may ultimately become a psychological dependence. Physical dependence is often regarded as the criterion of addiction. The fact remains, however, that this type of theory does not explain *why* the person has been drinking excessively for the length of time it takes habituation to develop. Any theory to be truly etiological must account for the forces, psychological or physiological, which motivate the drinking behaviour.

Furthermore, addiction as a result of habituation is a criterion of secondary addiction. "In the primary addict, the dependence upon alcohol is practically immediate and is psychologically motivated, although not necessarily without any physiological component; the

primary addict's inability to give up alcohol is to all intents an initial phenomenon" (Bowman and Jellinek, 1941).

The fact that secondary addicts are probably more numerous than primary addicts lends importance to the physiological contributions. This importance should not, however, obscure the fact that the physiological theories do not explain why the drinking habit was initiated. These theories explain the physiological process of habituation but not the necessary conditions for such an habituation.

Baldie (1932) spoke of the origin of the "craving" as a result of the chemical influence exerted by alcohol on the metabolism. However, he recognized this as a secondary addiction and explained the etiology of the drinking habit in sociological terms. Ladrague (1900) postulated an accumulation of toxins as a result of excessive drinking which caused the pathological drive to drink. He felt that the need for alcohol was caused by a "cellular paresis." T. A. Williams (1916) also believed that metabolic poisoning was the cause of dependence upon alcohol, and described as the main results of this poisoning, irritability, increased blood pressure, and fibrosis of the tissues.

The allergic theory of addiction is really only another name for the concept of physiological habituation. Silkworth (1937), Seliger (1938), and Strasser (1939), all felt that the allergic state is the result of an increasing sensitization to alcohol over a more or less extended period.

True allergic reactions to alcoholic beverages have been found in individuals. However, the reaction is not due to alcohol, but rather to other constituents of the beverages such as barley, malt, yeast, and egg white. Without doubt there are individuals whose nervous systems show an abnormal response to alcohol, but there is no justification for attributing their condition to true allergy since they do not exhibit any of the classical symptoms of allergic reaction as observed for any other chemical substance. Further, the excitation of the so-called "allergic" reaction to alcohol requires very large amounts taken as beverage alcohol compared to the very minute quantities of other allergens which will cause violent reactions in the susceptible individual. The allergic theory is important chiefly because a large number of individuals (Alcoholics Anon.) subscribe to it. From the etiological point of view it has little value, since it does not contribute to an understanding of the initiation of the drinking habit.

Individuals with a low blood-sugar level tend to be depressed and irritable. By ingesting alcohol and so releasing sugar from the liver they may relieve the psychological symptoms. This has been suggested as an etiological factor. It is felt, however, that it is not a sufficient condition for addiction.

Crichton-Miller (1928) postulates predisposing physiological constitutional factors. He describes the "hypopietic" and the "sub-thyroid" types of drinkers. No reason is given, however, why these types should be predisposed to alcohol addiction. Carrol (1941) sees "a poor hematocephalic barrier" as the significant factor in the constitutional inheritance of the addict. This "second class" barrier permits the easy passage of toxic substances into the cerebrospinal fluid, thus causing erratic and underactive synapse functions.

On the whole then, while explanations of the process of habituation may be satisfactory, one cannot speak of physiological factors which initiate excessive drinking. It is not thought that the theory of a special physiological factor in alcohol addiction has much significance in the light of the influence of social, cultural, and psychological forces on the drinking pattern.

Constitution and Heredity

Authorities who write within the framework of constitution and heredity generally offer an explanation of alcohol addiction based upon genetically determined personality deviations. The majority of these writers mean by personality factors constitutional dispositions; furthermore, the most frequent standpoint is that the constitutional disposition is a psychopathic one. There are more authorities who postulate a non-specific hereditary factor in the constitution than there are those who regard it as a congenital constitution. The view that alcohol addiction is directly inherited is not represented in the literature of the last decade. Kolle (1939) is one of the few who feels that the major etiological factor is hereditary constitution. He in fact explicitly states that the whole question is reducible to hereditary constitution. Both Juliusberger and Stefan (as reported in Bowman and Jellinek, 1941) are of the conviction that alcohol addiction is innate.

Numerous are those writers who, after acknowledging the importance of social, cultural, and psychological forces, proceed to forget most of these and go on to elaborate a theory in which constitution, either hereditary or congenital, is practically the only factor considered. Some authorities, while placing major etiological emphasis on the role of heredity, concede that in some forms of addiction this factor plays no part. Others consider hereditary factors significant in only one small group, a certain type of dipsomania. A considerable number of writers assign to hereditary constitution a role which is reasonably proportional to that of the numerous other factors which enter into the situation.

Tokarsky is the only representative of the view that denies sig-

nificance to hereditary constitution. He assigns the decisive role to forces active on the embryo in utero (cf. Bowman and Jellinek, 1941). There are, of course, those who discuss personality factors without mention of constitution and hence imply that it is of no significance.

In the literature, discussions of the relationship of psychopathic disposition and hereditary constitution to alcohol addiction are very prominent and occur with some frequency. Bowman and Jellinek (1941) feel that the importance of psychopathic disposition and hereditary liability is grossly exaggerated. They take exception particularly to estimates of hereditary liability which take into account, among other things, traumatic disorders, other uninherited mental disorders, migraine, and other petty deviations occurring in the families of alcoholic patients. With respect to the alcoholic psychosis group, several investigators report over 70 per cent of hereditary liability. The findings themselves may be quite valid, but the error is in the application of these findings to alcohol addiction in general. Some such investigations include all those types of psychosis which are in the modern view not of alcoholic origin, but in which drinking is incidental. Furthermore, the psychotics form only a relatively small part of the population of abnormal drinkers and, since they are symptomatic drinkers, they do not necessarily have much in common with the true addict or with other types of abnormal drinkers.

Investigations carried out on cross-sections of the addicted population (i.e. on alcoholics admitted to general hospitals) show with high consistency an incidence of 35 to 40 per cent of hereditary liability, and an incidence of psychopathic disposition in the patients of a similar degree. It is surprising to find the importance of hereditary liability and psychopathic disposition stressed practically to a degree of exclusiveness, in face of the fact that these factors are not found in the majority of the patients. Actually, psychopathic disposition and perhaps hereditary liability may be expected in the symptomatic drinkers who are probably the farthest removed from the problem of addiction, and in the group who are designated as true addicts and which forms, although the most interesting, a relatively small part of the addicted population. The group of secondary addicts, according to available evidence, is generally free of psychopathic disposition and hereditary liability.

Leading authorities have pointed out from time to time that the position that alcohol addiction is an expression of psychopathy is an untenable one, but in spite of this, the idea of the decisive role of hereditary liability or of psychopathic disposition has remained. Bleuler (1937) feels that the simple craving for alcohol is not neces-

sarily related to psychopathic disposition and that the variation of the normal human personality is large enough to furnish the multiplicity of psychological premises for this craving. The fact that women and Jews have as much psychopathic disposition and hereditary liability as anyone else and yet have a much lower rate of alcoholic addiction adds proof that these conditions do not necessarily lead to alcohol addiction.

Although the statistics show a greater incidence of psychopathic disposition and hereditary liability in the population of abnormal drinkers than in the general population, no evidence has been produced to show that these factors necessarily lead to addiction. Therefore the most that can be said is that persons with such an hereditary liability or with such dispositions are more likely to succumb to the risk of addiction.

Psychoanalytic Views

Bowman and Jellinek (1941), reviewing the psychoanalytic literature on alcohol addiction, found rather wide differences in the etiological views of the analysts. They pointed out, however, that this is to be expected, since an analyst's views may be based on the analysis of one or two patients only, or are interpretations of data of other analysts. Seemingly, analysts find the same elements of personality development in the addict; they differ, however, in the elements to which they assign true etiological importance. Also, the analyst by the nature of his practice is more likely to encounter the true neurotic primary addict than the secondary addict.

The explanation of alcohol addiction which claims most adherents among the psychoanalytic school is one which has its origin in the writings of Freud, and which postulates an affinity between alcohol addiction and repressed homosexuality. Freud believed that the psychopathology of alcohol addiction is closely allied to the mechanism involved in paranoid delusions; that the inebriate's delusions of jealousy and the context of some of his hallucinatory experiences represent the homosexual wish fantasy of loving a man. In persons with delusions of jealousy, drink removes inhibitions and undoes the work of sublimation. Not infrequently disappointment over a woman drives a man to drink. Freud says this means that the man resorts to the public house and to the company of men who supply him with the emotional satisfaction which he failed to obtain from his wife at home. If these men become the objects of strong love, such a situation being unacceptable to the superego, the man will unconsciously protect himself by projecting his love for his associates onto his wife. He there-

fore suspects the woman in relation to all the men he himself is tempted to love. A similar mechanism is responsible for delusions of jealousy in women.

The majority of analysts assign the homosexual theory a prominent position in the etiological picture, and some of them (Read, 1920; Juliusberger, 1916; Tabori, 1933), assign the decisive role to homosexuality. Thus Tabori says: "The psychic reason for alcohol addiction is the incompletely repressed homosexuality which the individual cannot sublimate." On the other hand, Glover (1927) believes that the homosexual fantasy system has no direct bearing on alcohol addiction.

Abraham (1926) feels that alcoholic intoxication is identified with sexual excitation, that respect for prowess in drinking is closely related to respect for sexual prowess. A man who does not drink is considered a weakling. Thus, according to Abraham, when in later years potency declines, men grasp eagerly at alcohol which becomes the surrogate for the vanishing procreative powers. In this substitution Abraham detects a similarity to certain sexual perversions (voyeurism, fetishism) in which a sexual stimulus which normally might serve as an introduction to the sexual act replaces it. In Freudian terms this is fixation at a preliminary sexual goal. For example, in normal circumstances looking at a sexual object is only a fore-pleasure, while the sexual act alone carries with it gratification, the "voyeur," however, derives his sexual pleasure from merely "looking." Abraham feels that the same mechanism is at work in the alcohol addict. Alcohol has a sexually exciting effect; the drunkard pursues this excitation and in so doing forfeits the capacity for normal sexual activity. The inebriate uses alcohol as a source of effortless gratification and he turns from women to alcohol. This is painful to his self-respect; he represses the fact, develops a neurosis or psychosis, and projects his feelings of guilt onto a woman in the form of delusions of jealousy. The content of some of the alcoholic's hallucinations is supposed to lend support to the homosexual theory.

Tausk, Sachs, Rado, and Davidson (as reported in Bowman, 1941) also equate drinking with sexual activity in a perverted form in which a fore-pleasure becomes the end. Davidson (1939), explaining the mechanism of addiction on the principle of fore-pleasure, says that "Alcohol which causes physiological imbalance of stimulation and depression of the integrated nervous system will also result in a continuous urge for repetition of excitation due to the mediated pleasure and necessity for discharge. Since the pleasure derived from alcohol is diffuse, it is akin to fore-pleasure. Not finding discharge it will try again and again."

Another prominent psychoanalytic theory is the one which explains alcohol addiction in terms of suicide. The chief exponent of this theory is Menninger (1938). He believes that "alcohol addiction . . . can be considered a form of self-destruction used to avert a greater self-destruction deriving from elements of aggressiveness excited by thwarting ungratified eroticism, and the feeling of a need for punishment from a sense of guilt related to aggressiveness. Its further quality is that in a practical sense self-destruction is accomplished in spite of, and at the same time by means of, the very device used by the sufferer to relieve his pain and avert his fear of destruction." According to Rado (1933) a pharmacothymic crisis arises when the pharmacothymic regime fails to provide elation. There are three ways out of this crisis: (a) a free interval to rehabilitate the depreciated value of the drug, (b) suicide, (c) psychosis.

Suicide is not self-destructive masochism, not punishment, but a means to dispel the depression for good. Rado's formulation seems to be a more correct evaluation of the relationship of alcohol to suicide.

Weijl (1944) feels that addiction is built up by the repetition compulsion and the pleasure-unpleasure principle. The sources of unpleasure in the alcohol addict are the dissatisfaction with himself and his environment, his realization of the criticism of the outside world and of his superego. In addition, there is the tension created by the repression of his sex life, especially his latent homosexual feelings. A direct substitute pleasure is obtained by the satisfaction of sadistic drives, that is, to possess the mother by oral identification and the cannibalistic killing of the father. All this is achieved in an unconscious symbolic way so that the repressive forces against these primitive drives do not need to be counteracted. In some cases the motives of partial suicide and rebirth are of great importance.

According to Simmel (1929) in patients with morbid cravings, onanism has succumbed to the threat of castration, and the subject is compelled to regress to pregenital positions of the libido. The form of craving is determined by fantasies, and drinking corresponds to an oral sadistic fantasy.

It is felt that the concept of castration anxiety, as discussed by Simmel (1929), Rado (1926), and especially by Bromberg and Schilder (1933), is limited in its usefulness as it leaves hardly any difference between alcohol addiction and schizophrenia.

A psychoanalytic viewpoint concerning alcohol addiction as a symptom of neurosis has been expressed by Goitein (1942). In a case of anorexia nervosa he concluded that sex hunger was displaced to the gastric sphere, and that it was resisted by anorexia and gratified by as-

suagement of thirst and periodic drinking bouts. He implied that this mechanism may underlie much of the excessive drinking and addiction seen so frequently among prostitutes. Incidentally, this type of study illustrates very nicely how the analyst bases his conclusions concerning addiction on the analysis of as few as one subject.

It is probably true that none of the psychoanalytic theories discussed here reveal any of the sufficient conditions for the genesis of alcohol addiction. All the developmental elements which have been invoked as etiological may be found in behaviour disorders of quite a different nature. Generally speaking, the analysts have only touched upon the necessary conditions of abnormal behaviour.

Psychological Views

A unified psychological theory to account for alcohol addiction has not as yet been produced by research. To the individual looking for a methodologic and theoretic orientation the field seems confusing because of the diversified and specialized character of the attack on the problems of abnormal drinking.

Not all of the numerous viewpoints are considered here. In this section an attempt has been made to include those viewpoints which are most widely discussed in the literature and which seem most likely to be making a positive contribution towards an understanding of the problem of abnormal drinking.

The thesis that parents are responsible for the development of alcohol addiction in their children is often expounded in the literature. Although the terminology varies, the underlying ideas are usually something like this:

Abnormal relations with parents such as excessive love of one, fear of the other, over-protection or rejection of the child, are bases upon which social deviations are developed. Delinquency, inebriety, homosexuality, or a number of other behaviour disorders may result. In the childhood of the alcohol addict the chief factors are the over-protective mother and the severe, repressive, autocratic father. In other words, the psychological crime of "parental loving-dominance" is perpetrated against the child. The aftermath is obvious. The time comes when the child arrives at the chronological age at which society expects emotional maturity accompanied by adult behaviour. The emotionally stunted individual makes an attempt to satisfy these demands by a few futile and inadequate gestures. He fails. Society begins to exact its penalty for such failure. Perhaps the rest of the story, its alcoholic component, is a matter of chance. But it is a heavily weighted chance, because in our society discovery of alcohol as an escape from psychological pain,

and as a means of satisfaction is very likely. The use of alcoholic beverages is the least socially reprehensible, and the most readily available of the techniques for evading reality; the other possible adjustments for the immature person are not socially acceptable and are not made easily available by the culture.

Schilder (1941) takes the view that the addicted person is one who from his earliest childhood on has lived in a state of insecurity. This insecurity is in relation to parents. The child has felt ridiculed and pushed into a passive position, sometimes by threat, sometimes by corporal punishment, and sometimes by degradation. This threat may come from both parents or from one parent only. The community is experienced as being threatening in much the same way as the parents are. These factors are responsible for the characteristic social tension and insecurity of the alcohol addict. Alcohol eases this painful situation, it generates feelings of social security and acceptance as long as the intoxication lasts. When it wears off, the underlying tensions and terrors reappear in increased form and demand renewed drinking.

Seligser (1948a) feels that the best prevention of alcohol addiction will lie in an attitude of the parents which does not increase the insecurity and passivity of the child, and guarantees a reasonably free development of sexual adaptation.

Strecker (1941) attacks the problem in terms of introversion and extroversion. He advances the opinion that the addict is likely to be an introvert. He agrees that there is a great deal of drinking among those whose dominant traits are externally oriented, but the real purposive consumption of alcohol is more common among those who look inward and are not socially facile. Alcohol addiction in Strecker's view is one of the psychoneuroses of introversion. The introvert has a logical surface reason for his drinking in that it makes him feel less socially inadequate. The extrovert's personality endowments grant him a feeling of social ease; he uses alcohol to heighten the pleasures of reality.

Once the introvert has satisfied the surface reasons for his drinking, that is, attainment of greater social ease and satisfaction, he soon begins to drink pathologically. A much deeper need demands satisfaction and this is the important one etiologically.

"This urge is a demand for regression to lower levels, levels of lessened responsibility, immaturity, and finally fantasy." Strecker feels that the journey to regressive levels is the cause for pathological drinking. "Even in more or less normal social drinking, alcohol quickly dissolves for the drinker, the garments of sober responsibility and years. In pathological drinking very deep levels of regression are commonly ob-

served, even the level of infantile helplessness with abandonment of control of the ordinary bodily functions."

In assigning such a virtually exclusive etiological role to introversion and to the introvert's initial drinking as a device to oil the wheels of social intercourse, it would seem that Strecker has accounted for but one of the drinker types. That is, what has elsewhere been termed "the symptomatic schizoid drinker." If this is true, then he has dealt with only a small segment of the population of abnormal drinkers. Further, in the light of other evidence, his statement that the extrovert uses alcohol "to heighten the pleasures of reality" hardly seems adequate to account for the variety of drinkers who could be grouped under the general designation of "extrovert."

Strecker's hypothesis that true alcohol addiction is a neurosis, defensive in character, with the object of shutting out reality in inimical life situations, and this mechanism developing as the aftermath of the stunting in childhood of emotional growth, is probably a sound one. His method of developing it, however, is open to criticism.

G. N. Thompson (1948) draws a distinction between physiological addiction and what he calls quasi, or psychological, addiction. In individuals who have become accustomed over a long period of time to the sedative effect of alcohol, if the sedative is withheld, withdrawal symptoms may develop. In the case of alcohol addiction, the symptoms can be removed by a sedative drug other than alcohol, for example, the aldehyde of the ethyl ester. It becomes apparent, therefore, that alcohol addicts are addicted to sedation itself.

In Thompson's view, most abnormal drinkers have basically psycho-neurotic personalities and drink heavily because they feel inadequate and because their inhibitions prevent them from fulfilling their desires. Their drinking enables them to overcome inhibitions and to attain freedom from the physical and mental symptoms of the neuroses which are disturbing them. Thompson adds, however, that these individuals through their use of alcohol are not attempting to escape from their personality characteristics as much as they are attempting to ventilate them. These characteristics demand periodic expression and alcohol makes their expression possible.

Bird (1949) and Katsoff (1943) explain alcohol addiction in terms of the use of alcohol by the individual to escape from a harsh inner reality. Marshall (1947) believes that addiction is more likely to develop in an atmosphere which fails to create in the individual the ability to cope with frustration.

Lolli (1949) sees addiction as an expression of lop-sided mental growth, that is, infantile traits in one part of the personality coexisting

with mature traits in another. Because of the interdependence of mental functions, those which are stunted adversely affect those which are not. Heredity and the relationship of the individual to his environment are the factors responsible for this uneven development. Heredity contributes instability and a low threshold for stress. Clinical evidence justifies the emphasis which is usually given to environmental factors. The fact that the same difficulties are sometimes observed in individuals who are not addicted to alcohol as in those who are suggests the necessary, although minor, role played by heredity. The most that can be suggested is the genetic transmission of an ill-defined susceptibility to inimical life situations.

Lolli believes that, to a great extent, addiction has its origin in anomalous family constellations which create serious difficulties in childhood.

The addictive drinker is chained to an infantile unity of mind and body in which psychological and physiological phenomena are inseparable when he suffers from the intolerable pressure of his unconscious (and, to a certain extent, conscious) longings for physical warmth, pleasurable skin sensations, maternal coddling, and the warm liquid filling of his stomach. For him these are undifferentiated from longings for security, assurance, self-respect, independence, and omnipotence. The revelation that alcohol can provide a blended pleasure of body and mind, and at the same time can satisfy most of his specific longings, marks the beginning of addiction. The satisfaction is short-lived, however, because the chemical action of alcohol on the central nervous system and the associated psychological repercussions serve to increase the addict's infantile longings, rendering attempts at their gratification increasingly unsuccessful.

Thus Lolli states: "The life of the addictive drinker is governed by a vicious circle: real failures are compensated for by alcoholic 'successes.' If not broken, this circle ultimately leads to alternations of ever lengthening euphoric stupors and ever shortening periods of painful awareness of reality. As the addiction progresses, these alternations resemble more and more the rhythm of hunger and sleep at the very beginning of the infant's life until they are concluded by the irreversible stillness of death."

Timm (1948) explains the genesis of addiction in this way:

An instinctive urge or painful memory, either of which is repugnant to the ego, occurring in a fairly well, but not perfectly integrated personality, is repressed. The urge or memory carries a high emotional overload and when denied expression in consciousness, produces tension. This demands relief. The individual is not sufficiently integrated to sublimate the effect and not sufficiently dissociated

to allow indirect expression symbolically. He takes alcohol which permits dissociation to occur, so that the behaviour becomes psychopathic; or dissociation may proceed to disintegration with development of frank psychosis. The patient is hospitalized for acute alcoholic psychosis which subsides in a short time. His behaviour becomes normal and he promises himself and others that he is through with drink. Consciously he has learned his lesson and he has full insight into his future if he drinks again, but unconsciously he has learned another lesson—he has learned how to relieve tension. At a variable period following his release from the hospital the same sequence of events will occur, unless the underlying complex, or the factors which excited it, are resolved.

A study of the psychological views on the etiology of alcohol addiction reveals what seem to be important oversights and omissions. An outstanding one is nicely illustrated by Timm's contribution. He says, in effect, that the imperfectly integrated personality utilizes alcohol for the relief of tension. How the individual learned to use alcohol in the first place to accomplish this purpose, Timm neglects to say. In neglecting the social and cultural aspects such as social pressure, the pressure of economic interests, the ambivalent attitude of society toward alcohol, to name but a few, Timm is guilty of a serious omission.

Indeed, many of the psychological writers are guilty of such omissions. Characteristically, after naming these factors they proceed to forget them, as if they were merely vague incidentals of the problem. Another serious deficiency is one which has been discussed earlier—the tendency for writers to deal with one or two specific segments of the drinking population, and then to generalize as if they were accounting for all abnormal drinkers.

A perusal of the psychological literature on alcohol addiction leaves one with the impression that many writers are evading the central issues of the problem. Numerous are those published articles which enumerate the personality traits of the alcoholic and describe his behaviour. What motivated the individual to drink pathologically they usually neglect to say. More important is the fact that the personality characteristics of the alcoholic can be interpreted as the result of his alcoholism rather than as etiological factors in its development.

The Tolerance Factor

Tolerance is mentioned not infrequently as one of the important elements in alcohol addiction. By psychological tolerance is meant the ability of the individual to withstand the disintegrating effects of the impact of alcohol on the total behaviour. There are individuals who lose control through the slightest stress caused by some mishap, while others are able to take such things in their stride. The ability to

integrate stresses into the total behaviour is considered to be a function of the organization of the personality. It is not unreasonable to expect that the well-organized personality is also better equipped to withstand stresses of a physiological nature. The well-organized person is alert to factors which may upset his equilibrium and is immediately aware of them, and compensates for them, through exercising conscious control, or even partially unconsciously. It may be that the psychological ability to counteract the effects may develop through familiarity with the nature of these effects. Thus, what is termed acquired tolerance or habituation may be largely a psychological process, unaccompanied by any physiological adaptation.

The role of tolerance in addiction is not a simple one. A person with a low gastric tolerance is not likely to become an addict, since he will probably not be disposed to expose himself to such inevitable discomfort. The possibility that gastric intolerance may be a psychological defence mechanism in some cases must also be considered. While gastric intolerance may practically always be preventative of addiction, high psychological tolerance may actually foster it, since the facility for managing the stresses set up by alcohol may lead to heavy drinking and ultimately to secondary addiction.

Initial or inherent tolerance probably plays a very prominent role in the origins of addiction. In any given personality type, alcohol tolerance may at least determine whether or not the person will become an addict.

Alcohol and Mental Disorder

In appraising the role of alcohol in mental disorder, there are two aspects of the problem to be considered:

- (1) The part which alcohol plays in the direct production of mental disorders in the drinker,
- (2) The relationship of alcoholism in the ancestors to mental deviations and defects in the descendants.

Thomas (1943) points to the lack of uniformity in the statistics on (1). He states that the earlier studies on alcohol addiction were more definite in showing injurious effects, but as the studies are subjected to increasing scientific knowledge and the many factors related to mental disorders are taken into account, the injuries which can be said to be due directly to alcohol are less certain. It is extremely difficult to be certain that alcohol has damaged the germ plasm of an individual of normal constitution. Not long ago a variety of mental disorders were attributed directly to the effects of excessive alcohol ingestion, but as knowledge of mental disorders has improved, authori-

ties have come to regard abnormal drinking as a symptom rather than a causal factor in mental disorders. Carefully studied family histories of psychopathic and psychotic descendants of chronic alcoholics tend to confirm this view. Moreover, in the case of the addict himself, the excessive drinking seems to be more of an attempt to render his behaviour disorder less disturbing than it is a primary element in the development of his illness. If the addict continues his excessive drinking long enough, serious alterations in the efficiency of the functions of his nervous system occur. Sometimes damage to the tissues and cells is the result. These changes are expressed in a variety of clinical pictures. They are usually classified under the headings of chronic alcoholism, delirium tremens, Korsakoff's psychosis, and a state of hallucinosis. Authorities are in agreement concerning the role of alcohol in the production of D.T.'s, Korsakoff's psychosis, and some of the other conditions developing in the course of prolonged excessive drinking, but there is less certainty in the relationship of alcohol to the state of hallucinosis.

There are some authorities who do not agree that cases of hallucinosis should be classified with the alcoholic psychoses but wish to place them with the more serious schizophrenic group, thinking that in these individuals there is more evidence that alcohol has merely hastened the development of a psychosis which would have made itself known at a later date in the absence of excessive drinking.

According to Thomas, the clinical picture of some of the chronic states of hallucinosis attributed to alcohol is difficult to distinguish from that of the paranoid form of schizophrenia, especially after the patient has been separated from alcohol for a long period. Many pursue a clinical course similar to the malignant paranoid schizophrenic case. "If one regards addiction and other forms of excessive drinking as an attempt to overcome certain personality conflicts rather than as a direct agent in the production of these conflicts there arises the problem of determining the nature of the factors at work." So far a satisfactory answer has not been given to the question.

Alcohol and Drugs

Moore (1941) feels that the chronic alcoholic resembles the drug addict psychologically, and to a certain extent has a similar physical makeup due to poor habits of nutrition which lead to vitamin deficiencies.

Moore points out that many drug addicts are also excessive users of alcohol, and might validly be classified alcohol addicts as well.

Pohlisch, however, has pointed out that an enforced abstinence

during the war did not make morphinists or cocainists of former alcohol addicts and Bleuler found that the psychopathic disposition in alcohol addiction has no affinity with the one in morphinism and that there is no general disposition for addictions (cf. Bowman and Jellinek, 1941). Apparently alcohol addiction and morphine addiction are different genotypes. Bleuler also found that in the families of abnormal drinkers, morphinism occurs only in the same proportion as in the general population.

An important contribution of impressionistic observation comes from Pohlisch's comparison of morphinists and alcohol addicts. He points out that the main characteristic of the morphine addict is a need for self-assertion which is out of proportion with his actual accomplishments. This is not due to lack of intelligence but to incapability for steady work and goal, and frequent indulgence in organ sensations. In contrast with this is the psychological and bodily robustness of the drinker. Morphine quiets the need for self-assertion but alcohol increases the ego feeling. The morphinist does not seek gregariousness as the drinker does. Furthermore, morphinists are not concerned about the waning of the sexual drive and potency, while the abnormal drinker feels this keenly and shows it in his jealousies.

It would seem that the generalizations here are far too sweeping. The psychological and bodily robustness mentioned by Pohlisch apply only to a certain type of secondary addict, not to the primary addict, and concern over the waning sexual powers is probably true only of addicts in the initial stages of the disease. Nevertheless, his suppositions provide a valuable lead.

Similar differences between morphinists and alcohol addicts have been pointed out by Möllenhoff (1935), and there seems to be general agreement among authorities that the different kinds of addictions are usually mutually exclusive. Not infrequently, however, the view is expressed that abnormal drinking is a source of other drug addictions.

That alcohol is a habit-forming drug has been denied by White (1916), and Diethelm (1936) is in doubt whether one should speak of addiction in the case of abnormal drinking. He pointed out that although the chronic alcoholic develops a certain tolerance, he then remains on a certain level and does not react with increased physiological craving.

The tissue changes following the habitual use of alcohol are not the same as those in morphine or cocaine addiction. If addiction is viewed in terms of tissue changes only, one is not justified in speaking of alcohol addiction. The fact remains, however, that a considerable number of people after experiencing relief from anxiety through

alcohol become dependent on it for their conduct of life. With this in mind, it seems neither necessary nor advisable to deny the phenomenon of alcohol addiction.

Social and Cultural Factors

Bowman and Jellinek (1941) reject one explanation after another of addiction which has been offered by departmentalized research. They conclude that "one cannot speak of a physiological theory of the factors which determine excessive drinking," although the process of habituation may be an important factor. They find that the role of personality has been overvalued. Personality "furnishes the terrain on which alcohol addiction may or may not grow"; it is not in itself sufficient cause for addiction. "No personality constellation leads of necessity to addiction. Certain forces must act on the terrain to bring about addiction or abnormal drinking." It is felt that these forces will be eventually discovered through the social and cultural approach.

Most writers on the subject pay at least lip-service to social factors as etiological elements, but there are few who have given recognition to these factors as the principal ones, or have given the matter the consideration it deserves. The role of social factors has been particularly stressed by Myerson (1943), Pohlisch (1933), and Mapother (1927). The latter goes so far as to exclude individual factors from serious consideration.

Poverty is one of the social factors which has been discussed by numerous writers as an important source of addiction. Bowman (1941) feels that the question of poverty as an etiological factor in addiction is rather complex and that the role of poverty has probably been greatly overrated. The poverty theory originated in the wave of heavy drinking which followed in the wake of the rapid industrialization of Europe and the consequent impoverishment of the classes of skilled trades. Pohlisch pointed out that impoverishment is followed by abnormal drinking under certain conditions only. He demonstrated that, in general, in the last fifty years or so, the consumption of alcoholic beverages and also the incidence of alcoholism have decreased in times of economic depression and unemployment, and increased in times of prosperity.

Investigations have shown that the impression that alcoholism is a poverty disease, occurring only sporadically in the higher economic levels, is erroneous. Statistical studies based on mental hospital populations and on admissions to general hospitals are the source of this biased picture. Populations of private sanatoria which draw their patients from the higher economic strata have been neglected in

these studies, and until they are investigated, a biased picture of alcohol addiction will be obtained. On the whole, poverty may account for addiction in a certain portion of the addicted population, but the idea of alcoholism as a poverty disease must be rejected.

Occupation, as one of the exogenous factors of abnormal drinking, is frequently mentioned in papers on alcohol addiction. This matter has received consideration from a statistical standpoint only. Jellinek (1941) states that there is little doubt but that employees of breweries and distilleries, as well as bar attendants and waiters, contribute more than their share to chronic alcoholism. This may be inferred from occupational statistics of admissions to mental hospitals. There is little known, however, about the factors which differentiate between the members of those occupations who become abnormal drinkers and those who do not. An investigation of these factors might be well worth while.

The alcoholic personality types which have been isolated and described are themselves products of a specific culture pattern; Kardiner's (1939) investigations show there is little reason to expect to find the same personality constellations in other societies.

Whether addiction in our own culture is motivated by repressed homosexuality, or introversion, or insecurity, or is a means of realizing daydreams, one can be confident that such formulations will have a very limited value for an understanding of drinking in other societies. In our own peculiar culture drinking may have these functions, but for an understanding of the role of alcohol in other cultures a more general theory is needed.

Horton (1943) sees the anxiety-reducing capacity of alcohol as a universal factor. "Anxiety is so universal and constant an experience of mankind that any means of alleviating this burden of pain must be valued." Despite the "rather limited and by no means unique food value of alcohol, its power to reduce anxiety stands out as unequivocally significant." However, the actual observed drinking habit is the product of competing responses, for the act of drinking may elicit new anxiety if it is followed by painful consequences of either a social or a physiological origin. Whether or not drinking will occur will depend upon the relative strengths of the competing responses.

In his investigation of all primitive societies for which data were available, Horton found that societies with inadequate subsistence techniques tended to have strong degrees of insobriety. To Horton the direct factor seemed to be the anxiety induced by the basic insecurities of their lives, such as the constant danger of drought, insect plagues, floods, crop failures, or other threats to the food supply. Societies

which were rendered unstable by contact with other more powerful groups also had high degrees of insobriety.

Bales (1946) considers three general ways in which culture and social organization can influence rates of alcohol addiction. The first is "the degree to which the culture operates to bring about acute needs for adjustment, or inner tensions, in its members." The second is "whether the attitude toward drinking positively suggests drinking to the individual as a means of relieving his inner tensions or whether such a thought arouses a strong counteranxiety." The third general way is "the degree to which the culture provides suitable substitute means of satisfaction." If the inner tensions are sufficiently acute, certain individuals will become compulsively habituated in spite of opposed social attitudes unless substitute ways of satisfaction are provided.

Bales distinguishes four different types of attitude which are represented in various cultural groups and which seem to have different effects on the rates of alcoholism.

"The first is an attitude which calls for complete abstinence. For one reason or another, usually religious in nature, the use of alcohol as a beverage is not permitted for any purpose." An outstanding instance of this attitude is to be found among the Moslems. The second is a ritual attitude toward drinking. "This is also religious in nature but it requires that alcoholic beverages, sometimes a particular one, should be used in the performance of religious ceremonies." Typically, the beverage is regarded as sacred. The third is called a "convivial attitude" toward drinking and is a social rather than a religious ritual, performed because it symbolizes social unity and because it facilitates social intercourse. The fourth type is described as a "utilitarian attitude" toward drinking. Under this heading Bales includes medicinal drinking, and the types calculated to further self-interest and personal satisfaction.

It would be difficult to find a better example for the ritual attitude than the case of the Orthodox Jews. They are not total abstainers, as many people believe. They drink regularly, mostly for religious reasons, although to a limited extent in a social way. Yet they are very seldom arrested for drunkenness and their rate of admission with alcoholic psychosis to mental hospitals is almost negligible. In almost any table showing rates of abnormal drinking for the various ethnic groups in the United States, the Jews are at the bottom of the list as regularly as the Irish are at the top. There have been many attempts to account for this. Immanuel Kant (1793), believed that since the Jews' civic position was weak, they had to be very rigidly self-controlled and cautious. They had to avoid the scandal and perhaps persecution which might result from drunkenness. Fishberg (1911)

points out that the Jews have had to live under persecution and states that the Jew knows that it does not pay to be drunk. Myerson (1943) emphasizes the Jewish tradition itself, and the hatred the Jews have developed for the drunkard, along with the factors of danger. Glad (1947) explains the divergent rates of inebriety between the Irish and the Jews in terms of the Jewish tendency to drink for "socially and symbolically instrumental results" and the Irish tendency to use alcohol for "personally and socially affective consequences." It is Bales's opinion also, that the ritual orientation is the important factor accounting for the low rates of alcohol addiction among Jews.

If it should be supposed that the Jews simply do not have their share of maladjustment, convincing evidence can be advanced to the contrary. Besides all of the reasons for maladjustment to be expected from their insecure social position, it has been pointed out that, with one or two exceptions, they are as frequently represented in the major mental disorders as other ethnic groups. It seems to be the impression of authorities that the Jews have higher rates of neurosis than most other ethnic groups. According to Bales, Jews are known to have high rates of drug addiction, at least in certain areas of the United States. In a study made in the United States of all draftees rejected in World War I for psychiatric reasons, the Jews were found to have a higher rate of drug addiction than any other ethnic group. This supports the belief that their apparent freedom from alcohol addiction can hardly be explained in terms of either a general immunity to addiction of any kind or a lack of acute maladjustment.

Bales describes convivial drinking as "a mixed type, tending towards the ritual in its symbolism of solidarity and towards the utilitarian in the good feeling expected. Wherever it is found highly developed it seems to be in danger of breaking down towards purely utilitarian drinking." This breakdown is to be found in marked form in the Irish culture, and its prevalence along with widespread inner tensions seems to explain the high rate of alcohol addiction among the Irish. There are, too, certain occupational groups with high rates that seem to trace mainly to an occupationally induced utilitarian attitude toward drinking. It is widely recognized, for example, that rates are disproportionately high among individuals connected with the manufacture and sale of alcoholic beverages, such as brewery and distillery employees, public house, hotel, and tavern personnel. Manual labourers who do heavy, exhausting work, drink to reduce their fatigue or to escape chronic unpleasant working conditions.

Finally, there is a third cultural factor which seems to have a bearing on rates of alcoholism—"the degree to which a culture provides

suitable outlets for the inner tensions and needs for adjustment which it creates." One of the most common substitutes for alcohol is the use of some other narcotic drug; the high rate of drug addiction among the Jews has been mentioned. Many Moslems, it is said, are users of hashish, and seem to be habituated to very strong tea and coffee. The Chinese and the Japanese, who are supposed to have low rates of alcohol addiction, are thought to be frequent users of opium. Each culture has its own peculiar devices.

The three general factors discussed by Bales, the acute inner tensions or needs for adjustment, the attitudes toward drinking, and the provision of substitutes, seem to give some insight into a few of the outstanding cultural differences in rates of alcohol addiction.

These social and cultural aspects of the alcohol problem, which have been briefly treated here, appear to Bacon, Jellinek, and other leading authorities to be of greater fundamental importance than the more specific psychological and physiological aspects of the problem.

II. PSYCHOLOGICAL INVESTIGATIONS OF ALCOHOL ADDICTION

SOME students of the personality of drinkers have been interested not only in the analysis of personality in its relation to abnormal drinking but also in the question of a more or less unitary personality type for alcohol addicts. The quest for the "alcoholic personality" has, however, been a vain one. While the seekers of the unitary personality type have resigned themselves to failure, they still grant the personality a decisive role even in the absence of a unitary type.

The psychological studies encountered are of varying natures and scopes. Some investigators have carried out formal psychometric studies with the aid of intelligence tests and personality inventories. These studies were made mostly on patients with alcoholic psychoses, but a few studies had alcoholics or abnormal drinkers without psychosis as their subjects. Other investigators, although they have employed projective devices rather than formal personality inventories, have proceeded largely on the same statistical principles as the psychometricians, namely, they counted the presence or absence of certain selected structural and developmental traits of personality, as well as some characteristics not strictly related to personality in groups of abnormal drinkers.

Another type of statistical personality study is the determination of the incidence of such broad personality types as introverts and extroverts, or cyclothymic and schizothymic personalities, among drinkers. More frequent is the "naturalistic" personality study, a form of investigation already discussed.

In the literature appear numerous accounts of psychological investigations of such topics as the effect of alcohol on reaction time and various other psychomotor functions, particularly those related to the operation of motor cars. Such questions as these are of interest and importance, but since they are on the periphery of the problem of what makes an addictive drinker, they are not considered here. In this section a general survey of psychological investigations which operate within the framework of personality has been attempted. It is perhaps well to point out that many of the divergencies and conflicting results which appear in the literature are more apparent than real. Throughout the series of reported investigations one can discern

a thread of consistency. It is well to remember, too, that not all investigations are of equal worth. Some are poorly conducted and controlled. Naturally, the conclusions of such investigations are not equal in validity to those of more systematic research.

Intellectual Level of Addicts

Investigations (Halpern, 1946; Moore, 1941; Roe, 1944; Wechsler, 1941) show that the alcoholic addict is not limited to any particular intellectual, occupational, or educational level. In intelligence, addicts range from feeble-minded to very superior; in occupation, from unskilled labourer to civil engineer; in education, from grade one to college graduates.

Mental impairment with respect to such factors as mathematical skill, logical analysis, immediate recall, and manual manipulation is found in a large percentage of the cases, and the degree of impairment appears to vary directly with chronicity.

Personality Studies

The Minnesota Multiphasic Personality Inventory (M.M.P.I.) has been used extensively in studies of the alcoholic personality. Investigations (Abramson, 1945; Brown, 1950; Manson, 1949) with this test indicate that alcoholic groups have much larger percentages of psychopathic personalities than do non-alcoholic groups. The alcoholic group as a whole does not show a typical pattern which is readily discernible from other groups. Within the alcoholic group, however, Chronic Alcoholic Psychopaths and Chronic Alcoholic Neurotics show a striking difference, each showing much greater similarity to psychopaths and neurotics, respectively, than to each other.

An interesting form of investigation is that in which the M.M.P.I. is administered to a number of moderate drinkers and near-abstainers; then a mild intoxication is induced by giving each subject about six ounces of liquor and the M.M.P.I. is administered again. The results show that the profiles secured before and after ingestion of alcohol are remarkably uniform for each subject. Presumably this indicates that the basic personality structure of non-addicts is not appreciably altered by alcohol. One would expect that when using a group of addicts the shapes of successive profiles would alter in some way. The instruments and technique described in this experiment show promise for a more elaborate investigation of the personality of the addict.

It is the Psychopathic Deviate Scale of the M.M.P.I. which appears to differentiate alcohol addicts from non-addicts. Analysis of the fifty items of the scale reveals that twenty-eight are diagnostically sig-

nificant at the 5 per cent level of confidence for both males and females; and in addition seven items have critical ratios of 2.0 and higher for males alone and another four items for females alone. The Psychopathic Deviate Scale gave 64.0 per cent correct predictions for males and 78.6 per cent for females when used as a screening test on a sample of alcohol addicts.

Psychometric Diagnosis of Alcohol Addiction

Manson (1948) expressed the opinion that some type of psychometric test could be devised which would differentiate between alcohol addicts and non-addicts. A pencil-and-paper test of this sort would be a great advantage to clinicians whose time is limited, and it could also be administered by personnel who need not be specially trained in psychology.

Accordingly, Manson constructed a test, the Manson Evaluation Test, for the psychometric differentiation of alcohol addicts from non-addicts. It contains 72 questions, all remotely associated with drinking, and of the type found in many objective personality tests. In a validating sample of 571 subjects, the Manson Evaluation Test made approximately 79 per cent good predictions for the male group and 84 per cent good predictions for the female group. The test has a reliability coefficient of .94. Validity was determined by the use of four different methods and was found to be .71 for males and .60 for females; it was indicated that alcoholics consistently make higher scores and non-alcoholics lower scores. Manson described seven personality characteristics in which alcoholics consistently made significantly higher scores than did the non-alcoholics. These traits were anxiety, depressive fluctuations, emotional sensitivity, feelings of resentment, failure to complete social objectives, feelings of aloneness, and poor interpersonal relationships.

Manson (1949) has also shown the Cornell Selectee Index, Form N, to be a valid instrument for the differentiation of alcoholics from non-alcoholics. The Cornell Selectee Index was found to make approximately 74 per cent good predictions for females. The coefficient of correlation for the Manson Evaluation and the Cornell Selectee Index, Form N, was found to be .80 for males and .77 for females.

Manson (1949) conducted a second study, in the course of which he constructed a 60-question test called the Alcadd Test. In this study, 123 alcoholics were compared with 159 non-alcoholics. The two groups were relatively comparable in age, intelligence, and socio-economic status. Illiterates, mental defectives, psychotics, and deteriorated individuals were not used. Highly significant statistical differences in

mean scores on this test were found to exist when alcoholics were compared with social drinkers and abstainers. Significant differences were also found when social drinkers and abstainers were compared. The Alcadd Test made approximately 97 per cent correct predictions for alcoholics and 94 per cent correct predictions for social drinkers. It predicted 100 per cent correctly for abstainers. Using the shorter form of the Richardson-Kuder formula, a coefficient of reliability of .92 was found for males and .96 for females.

A subjective analysis of the 60 items on the Alcadd Test revealed five characteristics of the alcohol addict. They were (a) regularity of drinking, (b) preference for drinking, (c) lack of controlled drinking, (d) rationalization of drinking, and (e) excessive emotionality.

Male alcoholics appeared to be more consistent drinkers and showed stronger preferences for drinking than did female alcoholics. Female alcoholics showed much less control over their drinking, more rationalizations for their drinking, and more emotional immaturity, than male alcoholics.

There have been other studies dealing with the construction of objective tests for the determination of alcohol addiction. Seliger (1946) published a questionnaire called "The Liquor Test," containing 35 frank drinking questions, each to be answered with a "yes" or "no" response. Each question appears to be a valid item. However, in the descriptions of his tests, Seliger does not present any experimental data, such as the number of subjects used, kinds of subjects, or procedures used in establishing the statistical significance of test items or test scores. Neither does he present validating criteria or the reliability of the test. Any single "yes" response may be indicative of a serious drinking problem. Apparently the responses are interpreted subjectively and empirically.

The Rorschach Test

Klopfer and Kelley (1942), reviewing earlier Rorschach studies, stated that no typical Rorschach pattern for alcoholics has been recognized. They wrote: "If chronic alcoholic deterioration has not become apparent, records of confirmed drinkers generally show neurotic, schizophrenic, depressive, or psychopathic personality trends . . . As deterioration develops, organic signs make their appearance." Since then, a number of other Rorschach studies on alcohol addiction have been made. These have been reviewed by Buhler and Lefever (1947), who state that several studies relate a number of Rorschach symbols to personality traits which are considered characteristic of the alcohol addict.

A Rorschach study of 40 chronic alcoholics was made by Billig and Sullivan (1943) during 1940. Twenty-nine were hospitalized alcoholics and 11 were inebriates from a jail. These subjects were divided into groups rated prognostically favourable or poor. After administration of the Rorschach, these subjects were followed up for a year. Billig and Sullivan concluded that "these test results do not represent the actual prognosis; they show merely the ability to respond to treatment." Buhler and Lefever (1947) summarized the Rorschach findings of Billig and Sullivan, descriptive of the addict, as follows:

High ambition and limited achievement; sensualization of personality difficulties but lack of adaptation; withdrawing from environment and inability to smooth relation between self and reality; self-centered wish fulfillment furthered by a rich imagination; emotional maladjustment involving weak restraint, poor poise and stability, little control of mood swings and desires, lack of attention, hypochondriacal ideas.

The Rorschach test findings of Seliger and Cranford (1945) were summarized by Buhler and Lefever as follows:

Ambition and urge for self expression but no ability to attain these because of lack of purpose and perseverance; hypersensitivity and paranoid traits; inability to adapt to social or personal relations and tendency to flinch from adult responsibilities and seek escape from reality; strong to violent emotional forces; a self-pampering tendency (I want what I want when I want it) which refuses to tolerate unpleasant states of mind; unreasoning demands for happiness, excitement, etc.

Seliger and Cranford (1945) state that there "is no one definite alcohol personality type as such, and therefore no definite alcohol Rorschach-protocol . . ."

Halpern (1946) described her Rorschach test findings in addicts as follows:

Not one of the Rorschach test records . . . could be described as a normal one. In all of them there was evidence of emotional disturbance . . . manifested in immature, impulsive and uncontrollable affective reactions . . . Emotions and not the intellect were in control.

Many of Halpern's alcoholic subjects showed childlike fantasy life, with instinctual behaviour exceeding the more mature constructive types of behaviour. Sexual maladjustment seemed to be present in all of the subjects. Halpern especially noted the absence in the addicts of those mechanisms used by other maladjusted people to avoid complex and difficult situations. The addicts accepted impossible situations as a challenge and attempted to meet the challenge "head on." They

experienced a great deal of anxiety. Halpern believes that basically the addict desires to play a passive role, but that there may be an element of self-punishment in his continued exposures to frustrating situations. He seems to be constantly testing himself or trying to prove himself to himself and the rest of the world.

Buhler and Lefever (1947) tested a group of 100 addicts, 77 males and 23 females. Their findings led them to believe that the alcoholic is more closely related to the psychopathic personality than to the basically normal or psychoneurotic individual. Their data suggested to them that alcoholics, even if classified within various clinical groups, have a number of essential and common personality traits.

Buhler and Lefever describe the alcoholic personality as having significantly low tension tolerance, indicative of the need to escape tension-evoking situations and low inner directivity or lack of imagination in setting up goals or developing sufficient motivation to achieve goals. The alcoholic reveals strong motivation through his instinctual needs; he is differentiated from the social psychopath by having greater critical self-awareness, guilt feelings, and anxieties, and more adequate rationality and emotionality. He shifts from lack of conviction in what he is doing to disapproval of the manner of his performance. He has frequent swings from boredom to anxious tensions.

Buhler and Lefever set the alcohol addict apart from the psychoneurotic and the psychopath in the following manner: The addict has a low tension tolerance and a high degree of anxiety; the psychoneurotic has a high tension tolerance and a high degree of anxiety; and the psychopath has a low tension tolerance and a low degree of anxiety.

Jastak (1940), in his study of ten alcoholic patients, reported that the only clear-cut inference possible was that none of the subjects had normal Rorschach records. Whether these abnormalities were the result of alcohol addiction or not, the author did not determine. He suggested that the two factors were interdependent at this stage.

Kelley and Barrera (1941) carried out a study of the changes in Rorschach interpretation by normal individuals before and after the ingestion of a certain quantity of alcohol. The Rorschach blots were presented to ten normals before the ingestion of alcohol, and again forty minutes later when all subjects were at a "level of mild alcoholic intoxication with moderate psychological impairment." In most cases there was an artificial shift in personality achieved, which was mirrored in the Rorschach responses. This would seem to indicate that the method is valid for reflecting early clinical changes in the personality pattern. However, these investigators are of the opinion that neither

clinical observation nor Rorschach study of a subject as yet offer any method of predicting an individual's type of reaction to alcohol, and no specific Rorschach pattern can be described for the diagnosis of acute mild alcoholic intoxication.

The Thematic Apperception Test — T.A.T.

Klebanoff (1947) reports a T.A.T. study of 17 male alcoholic patients, of whom the psychiatric diagnosis was "symptomatic chronic alcoholism without psychosis." He found that in the group there was

- (1) a relative absence of aggressive tendencies,
- (2) a marked emphasis on themas depicting internalized emotional stress, with little concern for themas of a pleasant or neutral kind,
- (3) a striking predominance of failure attributed to central characters, with consistent domination by minor characters,
- (4) power and social inferiorities characterizing the content of the group as a whole,
- (5) intoxication, domination, and rejection themas occurring with highest frequency.

Before any valid criticisms could be made of this investigation, one would have to know more specifically what kind of subjects made up the experimental group. The diagnosis "symptomatic chronic alcoholism without psychosis" implies that the excessive drinking was only secondary to a main underlying personality disorder.

Symptomatic drinkers constitute only a relatively small percentage of the addicted population. However, Klebanoff's work does illustrate nicely how the T.A.T. may be used in alcohol investigations and what type of information it yields.

A battery comprised of the Rorschach and the T.A.T. is used extensively both in clinical and in research work. Projective techniques appear to offer a dynamic and fruitful method of analysis of the personality structure of alcohol addicts.

Investigations Involving Both Projective and Non-Projective Tests

Hewitt (1943), employing the M.M.P.I. and the Pressey Senior Classification Test, found that alcohol addicts showed certain fairly definite personality trends. Intelligence level was often above normal. His subjects showed strong feelings of social inadequacy and inferiority. Hewitt found, as have numerous others since, that the Psychopathic Deviate Scale of the M.M.P.I. showed a significantly high score for his group; this trend was associated with neurotic, paranoid, or schizoid

trends. There is no evidence in this study to support a belief that an "alcoholic personality" exists. Neither latent nor overt homosexuality was typical of his subjects in general.

A study using a test battery comprised of the Goodenough, the Wechsler, and Rorschach, was carried out by Kennard *et al.* (1945) on 12 alcoholics. Appraisals of personality made by this battery revealed the following characteristics: deterioration, memory defect, anxiety, depression, aggression, dependence, poor emotional control, poor social adjustment, poor social contacts, and poor sexual adjustment.

Halpern (1946) used a "Level of Aspiration Test" in a study of addicts. The subjects were required to estimate the amount of time they thought they would need to perform a given task. This was repeated nine times after the subjects were told exactly how much time they had used. The relationship between a subject's actual time and his estimate of his future performance is the measure of his level of aspiration.

Halpern found that the addicts tended to overestimate their speed in performing the assigned task by an average of 2.7 seconds. This was a much larger difference than is usually found with normal subjects. She concluded that there was an inclination on the part of alcohol addicts to take chances, to expose themselves to the risk of failure. This would appear to be part of their general attitude, which brooks no limitations on their aspirations, thus inviting trouble rather than avoiding it.

In the same series of studies Halpern used a Vocational Interest Test, developed by Wechsler, consisting of a list of 42 occupations arranged in alphabetical order. The subject was told to assume that all the occupations paid the same salary and that he had the necessary training and ability to hold any of the positions listed; on this basis he was to indicate which occupations he liked and which he disliked. The occupations had various weights and a total masculinity-femininity score could be determined. The addicts' score within normal limits for masculinity was somewhat higher than certain other groups. Certain occupations showed a striking popularity, being chosen by almost every subject. These were primarily occupations in which physical activity was of prime importance. "The emphasis was on 'moving around,' not staying put in one place, and there was almost unanimous rejection of office jobs which involved stationary and routine work."

The studies reviewed point to the possibility of fundamental personality differences between addicted and non-addicted groups. Hewitt pointed towards a psychopathic personality trend in addicts. Halpern's Level of Aspiration Test emphasized the addict's failure to make adap-

tations to frustrating situations. The alcohol addict presumably insists upon challenging a hostile environment. Halpern's study of vocational interests indicated the alcohol addict's preference for work involving movement and action rather than stationary or routine work.

The question has been raised whether these traits are characteristic of the pre-alcoholic period or appear only after years of excessive drinking. Landis and Cushman (1945) wonder whether these traits might not be characteristic of any maladjusted person. These issues are of paramount importance. If the question of etiology is to be answered, it will first be necessary to devise some means of dissecting away behaviour due to chronic excessive indulgence in alcohol alone, so that the essential structure of the personality can be examined. One means of attacking the problem is to make a predictive diagnosis of alcoholism before the individual becomes an addict. If the alcohol-prone person could be recognized, a long step forward would be made towards finding out what makes an addictive drinker.



TREATMENT

THERE are about twenty different methods advocated for the treatment of alcohol addiction, all of which claim about the same percentage of cures and include Alcoholics Anonymous, psychoanalytic therapy pharmacological treatment, the Yale Plan Clinic, and the Conditioned Reflex Method. Authorities feel, however, that there are certain indispensable conditions which must be satisfied before any therapy can be adequate. The patient must have the desire to be treated. He must wish to get well. He must be willing to co-operate. It may be that if this will is present, it does not matter much whether benzedrine sulphate which makes one feel good, or emetine, which makes one vomit, is utilized; it is of relatively little importance whether an exhorter does the trick by firing zeal through the fear of God or the friendly greeter of Alcoholics Anonymous is the agent of reform. Regardless of the method of treatment employed, early diagnosis of the type of addiction and co-operation by the patient are essential for the successful end result in each case.

Voegtlin and Lemere (1942), in reviewing the various types of treatment currently employed, list 20 methods, with evaluations of their usefulness.

Under Psychological Methods, they list the following:

1. Compulsory and Punitive Measures. These are not truly a form of treatment. They do, however, represent the most primitive application of psychotherapy. Statistical data concerning the results obtained by legal methods of confinement alone (mental hospital, penal, rest, work, and similar institutions) are rather meagre. The general opinion seems to be that punishment or enforced hospitalization is useless in the treatment of addiction. Long-term voluntary commitment may result in from 15 to 35 per cent of probable cures.

2. Psycho-social Therapy. This includes such methods as securing medical care during the acute stage of alcoholism, followed by advice and help in securing employment, the correction of faulty home environment, and aid in smoothing out domestic and other incompatibilities. "Antialcohol Clinics" have been started in Switzerland, where consultations are held with the patients after working hours. Physical defects are remedied, social and environmental incompatibilities are ameliorated, and the patient is enrolled in an abstinence society.

The treatment of alcohol addiction by this method is apparently successful in some cases but no statistics are given.

3. Religious Conversions. This therapy includes the Alcoholics Anonymous approach. The Salvation Army also attempts this type of therapy. It is felt that conversion to spiritual principles is the motivating power in curing alcoholism, but environmental and occupational incompatibilities are also taken into consideration. A cure is not assumed until the patient has been subjected to temptation.

The religious approach is apparently successful in about 30 to 70 per cent of cases so treated. It is often coupled with homes or farms for inebriates, with residence for from one to four years. Religious treatment is, of course, limited in its application to those who will accept it.

4. Prolonged Institutionalization. Some authorities claim that to effect a cure of addiction a breaking-up of the patient's old habit patterns is essential. To accomplish this, patients are assigned to places called "practice farms." Here they are given freedom to come and go as they please, and are encouraged, but not required, to participate in the activities and responsibilities connected with the routine of the farm. Formal psychotherapy is used, including the discussion of current emotional problems, the investigation of earlier life, and the adjustment of incompatibilities in the patient's home environment.

Conventional psychotherapy in a properly controlled environment such as a farm or similar institution apparently results in cures of from 25 to 75 per cent. Treatment usually extends from six months to two years and is limited to selected cases. Only those sincerely determined to stop drinking would submit to such a prolonged treatment.

5. Outpatient Treatment. This therapy consists of treatment under office or outpatient conditions. It has the disadvantage of limited application. Adequate therapy consists of from 20 to 100 hours of treatment. One of the main objects of treatment is to establish a mentally conditioned aversion to drinking.

6. Psychoanalysis. This is one of the purest applications of psychotherapy and is the most complicated and time-consuming as well as the most expensive.

7. Hypnosis. This type of therapy is palliative only and rarely cures the habituation, and, more commonly, results in the substitution of other less desirable habits for the original. The methods used include hypnotic suggestion and hypnosis, followed by some psychoanalysis and a form of conditioning routine. It has not proved to be very effective and has now fallen into disrepute.

The Physiological Methods include:

1. **Conditioned Reflex Therapy.** This is a treatment in which a conditioned reflex is established aimed at creating an aversion or distaste for alcoholic beverages by virtue of their association during treatment with some sort of noxious stimulus. The latter stimulus is usually concerned with the elicitation of nausea or vomiting. This conditioned stimulus is represented by various alcoholic beverages. The repeated association of these two stimuli, under appropriate circumstances, is thought to result finally in the ability of the conditioned stimulus to elicit the response formerly elicited by the unconditioned stimulus.

The conditioned reflex treatment of alcohol addiction has never produced uniform or exceptional results. It is possible that the proper application of the conditioning technique will be found to result in from 60 to 70 per cent of cures. This type of treatment has the advantage of requiring only from five to ten days.

2. **Elevation of Blood Sugar Level.** It is believed by some people that, while all addicts cannot be so designated, there is a certain percentage who drink excessively because of hypoglycemic reaction, either chronic or sporadic, and of a spontaneous nature. Treatment consists of glucose and insulin by injection and sugar by mouth. Whiskey is withdrawn rather rapidly. Other therapeutic adjuncts consist of spinal puncture and benzedrine if depression is present. Hydrotherapy is beneficial, and psychotherapy and a process of re-education are usually necessary not only for the patient but also for his family.

Voegtlin concludes that this type of treatment has not been significantly successful in the treatment of alcohol addiction.

3. **Spinal Drainage and Other Measures Directed towards the Reduction of Intracranial Pressure.** Treatment is accomplished through repeated spinal drainages over a prolonged period of time with the removal of only a small quantity of fluid at each treatment. Treatment is continued until the spinal fluid pressure and pathologic findings have returned to normal. At this time the phenomenon of craving is supposed to disappear. The results in all cases have been inconclusive and inconsistent.

4. **Convulsive Therapy.** Insulin and metrazol have been tried with indifferent results.

5. **Serotherapy and Hemotherapy.** This involves the injection of serum from immunized horses into addicted patients. It is based on a concept of addiction as an allergic phenomenon and the results have been indifferent.

6. **Pharmacological Methods.** These methods have seldom been used in isolation in the treatment of alcohol addiction and the results have

been highly controversial. They include the following: (1) Benzedrine Sulphate, (2) Vitamin Therapy, (3) Atrophine and/or Strychnine with or without other drugs, (4) Emetine (other than in conditioning techniques), (5) Apomorphine (other than in conditioning techniques), (6) Rossium, (7) Sedative Medication, (8) Colloidal Preparation of Gold Salts.

From this survey it can be seen that, of the numerous types, only a few have produced really outstanding results. Some of the methods which have attracted more attention from therapists will be described in greater detail along with some forms of treatment not yet considered.

The Yale Plan Clinics

The Yale Plan Clinics were opened in March 1944. The creation of clinics for inebriates in Connecticut had been considered independently by the Connecticut Prison Association and the Laboratory of Applied Physiology at Yale University. These people decided to combine efforts and funds in setting up two diagnostic and guidance clinics. They are administered by the Laboratory of Applied Physiology through its Section on Alcohol Studies.

Initially, the clinics were not designed for the treatment of inebriates but were to be devoted to diagnosis and guidance; in recommending treatment it was expected they would utilize existing community resources.

When the Clinics were formed the founders had ten objectives in mind:

1. To contribute towards the prevention of inebriety. It was found that more than 50 per cent of inebriates have alcoholic fathers and mothers. This was not considered to be the basis for a hereditary alcoholism; rather, alcohol addiction was to be ascribed to the effect of example and to the physical and psychological neglect to which children are exposed in the home made by the alcoholic parents. When the inebriate is rehabilitated, he rehabilitates his home too, and his children are no longer exposed to the increased risk of inebriety. It was considered that in this case rehabilitation could be regarded as a step towards prevention. The inebriate was considered as a "disease carrier," who propagated the disease through social means.

2. To aid the inebriate to regain his usefulness in the community. This was included in the programme because it was the opinion of psychiatrists that a large percentage of inebriates are highly intelligent and are not originally impaired in the ethical sphere. For proof, they pointed out the adherents to the Alcoholics Anonymous programme, who have recovered and are now useful citizens.

3. To ease the economic burden developing on the citizen through present handling of inebriates. The handling of inebriates involved extraordinary and unnecessary expenditure through police effort, court procedures, and imprisonments. It was felt that a rational utilization of community resources in the treatment of inebriates would be much less costly than methods then in force. At that time also, men were needed for war production and some of this waste in manpower was thought to be recoverable.

4. To ease the crowding of prisons and jails by inebriates. It was shown that in Connecticut approximately 75 per cent of all arrests were made for drunkenness and it was hoped to divert inebriates from the jails. The fact was recognized that imprisonment is no remedy for inebriety, since inebriates who have served long prison sentences usually return to heavy drinking after their release. On this basis, it was pointed out that prolonged abstinence on an involuntary basis did not break the habit. Enforced abstinence could produce results only in combination with purposive treatment.

5. To serve as consultants to courts and welfare agencies in matters relating to inebriety. This objective was meant to assist judicial officials to discriminate between good and poor therapeutic risks, and to help these officials to make appropriate disposition of cases.

6. To serve as advisers to inebriates and their relatives. The Clinics were not to be devoted solely to patients referred by courts and welfare agencies. By opening them directly to inebriates and their relatives, it was hoped to be able to deal with individuals before they became court or welfare cases.

7. To acquaint the public in general with the medical aspects of inebriety. It was thought that the public needed more information about inebriety and that if the public was properly informed, many obstacles which interfere with the restoration of the rehabilitated inebriate to the community would be removed.

8. To serve as experimental models for the development of future large-scale procedures. There were no means available nor was there adequate knowledge for the rehabilitation of inebriates on a large scale. The Clinics might be a start in that direction.

9. To train social workers in this special field. Practically no attempt had been made to acquaint social workers with the nature of inebriety and consequently many inebriates had been handled inadequately. It was felt, therefore, that the Clinics would constitute an appropriate training centre.

10. To furnish adequate material for clinical-statistical research studies. Since the Clinics were to be connected with a research group,

an opportunity was afforded to place the evaluation of the treatment of inebriety on a scientific basis, and thus possibly to contribute materially to the success of future undertakings in this field.

Although the Yale Plan Clinics were intended, in the beginning, to be diagnostic in function, it became apparent that the requisite facilities for treatment did not exist in the community. Therefore the original scope had to be widened to include rehabilitation.

As research on inebriety progressed, it became apparent that there is not one type of inebriety, but several, and that each kind requires its own type of treatment. Not only are there several types of inebriety requiring different methods of treatment, but there are also certain forms of inebriety which are of such a secondary nature that they cannot be considered for treatment at all. These include persons with a behaviour disorder or feeble-mindedness in which case the inebriety cannot be regarded as a disease in itself but only as symptomatic of the underlying mental disorder or defect.

It also became apparent that some individuals became dependent upon alcoholic beverages not because of any personality deviations, but in the course of heavy drinking which might be in accord with the customs of their social group. Psychotherapy in these instances may be of little avail, since there is no serious underlying personality conflict which can be removed by the therapy.

Since each addict has a unique set of problems and since he is different from every other addict, treatment, in order to be effective, must take in the psychological, physical, and social aspects of his problems. In the organization of the Clinics, therefore, specialists in these areas, namely, psychologists, qualified medical practitioners, and social workers, are employed. In addition, contact is established for the patient with Alcoholics Anonymous or the Salvation Army.

The clinical management of these cases proceeds through three different stages. In the first stage, the patient is helped to control the environmental factors which are immediately threatening him. During the diagnostic study, he gains considerable insight into his disorder and about himself. The possibility of rehabilitation occupies his attention and brings about a shift of emphasis in his thinking and feeling about himself and his failures. Relief from physical symptoms is gained, and a considerable reduction in guilt feelings follows from his acceptance of the concept of alcoholism as a kind of illness.

As the patient passes through each stage of the clinical treatment, improvement in the total situation begins to result and the patient directs his attention along constructive lines; the family acquires new understanding of the significance of the drinking and there is usually

a marked drive by the patient towards readjustment along a number of channels. Frequency of contact and support is emphasized as being important for the patient during the initial stages of treatment.

In the third stage, an exploration of the underlying psychological conflict is attempted. If these conflicts can be brought into the open, there is a good possibility that the patient will be able to adjust to problems he may face after he leaves the clinic.

Concomitantly with, and on the basis of the diagnostic study, therapy is carried out on a group basis.

Suitable patients are invited to participate in a group. Attendance is voluntary and the atmosphere informal. The general plan for each meeting involves the presentation by the group leader of a topic relating to alcohol addiction as such, or to some factor of the personality, or to the interrelation of one with the other. In the initial meetings, the physiology of alcohol and its effect upon the body is presented, and in later meetings, the discussions are concerned with factors in the development of the personality, the impact of the environment upon the individual, and inebriety as a mechanism of pseudo-adjustment. The result of the discussions is to increase insight and self-confidence. Another important function is that the patient comes in contact with other men who demonstrate by their remarks that they have survived difficulties similar to those the patient is going through. By observing the patient in the group it is possible to gain awareness of his difficulties and perhaps refer him back to the psychiatrist for a few interviews, and so forestall a conflict situation which might lead to a relapse.

This group therapeutic approach is not unlike that used by Alcoholics Anonymous, but it is felt that this type of therapy has certain desirable features not found in the A.A. therapy. A more comprehensive programme of study of the etiology of addiction is carried on in this type of therapy than in an A.A. group. With a trained therapist to guide the discussion, there is no need to rely upon the individual group members' life stories as a basis upon which to build the sessions. The more pertinent factors of addiction are dealt with and the re-education of the individual is thereby hastened. However, patients are encouraged to participate in Alcoholics Anonymous activities as well.

The Yale Plan Clinics operate for the most part on an outpatient basis. The addict is not hospitalized unless it is necessary to build up his physical strength in the initial phases of the treatment. This allows the patient to remain at his employment, and consequently treatment is not such a strain on his financial resources.

There is a paucity of information on the effectiveness of this method of treatment but indications are very promising.

Hospital Treatment

Views vary as to the function of the general hospital in the treatment of the alcohol addict. Most authorities feel that there is at least a restricted place for it. In cases where alcoholic patients are suffering from organic or mental changes (e.g. Polyneuropathy, Pellagra, Amblyopia, Delirium Tremens) as a result of prolonged alcohol indulgence, the function of the general hospital is clear-cut. However, in the case of the addict who is not suffering physical damage, it is felt that prolonged hospitalization is neither necessary nor particularly desirable. Tiebout (1942), for example, feels that the treatment of the alcohol addict cannot be accomplished in an institution even if he stays there for a prolonged period and adjusts perfectly, for as soon as he must again face his problems unaided he is apt to relapse. He states that while treatment is best started in an institution, the period of extramural follow-up treatment is decisive.

Those individuals who advocate drug treatment feel that it is essential to keep the patient in the hospital throughout the course of treatment, whereas those advocating psychotherapy usually state that it is only necessary to "dry out" the patient and build up his physical strength in hospital. There is, of course, the group which advocates hospitalization with drug treatment and concomitant psychotherapy. Unfortunately, however, such a procedure usually requires a rather lengthy stay in hospital, and so is financially unavailable to a great many inebriates.

Corwin and Cunningham (1944) conclude, from their survey of hospital facilities for the care and treatment of addicts, that facilities are scanty and inadequate, and that those which exist are not always utilized to the best advantage.

The popularity and reported successes of therapeutic techniques which require relatively short periods of hospitalization suggest the feasibility of more active participation by general hospitals in the treatment of alcohol addiction. Psychotherapy on an outpatient basis might be provided for those patients for whom this method is indicated, but who cannot afford the services of private practitioners.

Drug Treatment

The use of drugs in the treatment of alcohol addiction is widespread and increasing in popularity. The drug used is commonly a very strong one such as apomorphine, emetine, antabuse, benzedrine, or insulin. The administration of drugs alone produces little effect upon the patient, but requires usually such adjuncts as conditioning and psychotherapy.

One of the most popular of the drug methods is the Conditioned Reflex Method which was developed at the Shadel Sanitarium, Seattle, Washington. In this method the action of the nauseant drugs, emetine and apomorphine, is utilized to elicit the unconditioned reflex of nausea and vomiting. The sight, smell, and taste of alcoholic beverages serve as the conditioned stimulus. These physical properties of alcoholic beverages, when utilized as the conditioned stimulus, initiate reflex activity of the centres of nausea and vomiting, thus creating a distaste which amounts to a definite aversion to the sight, smell, and taste of alcoholic beverages.

Lemere and Voegtlin (1950) point out that it is absolutely essential for the alcoholic beverage to be drunk slightly before the onset of nausea and vomiting due to the drug, otherwise a true conditioning cannot be obtained. If the drinks are given after the nausea and vomiting start, the purpose of treatment will be vitiated. Each treatment session lasts from thirty minutes to one hour and the number of treatments may vary from four to six, usually one every alternate day. The average length of hospitalization for this treatment is ten days. The aversion to alcohol is reinforced by one or two reconditioning treatments at any time the patient has a recurrence of the desire to drink, or routinely at the end of six months and again a year after the original treatment. Often patients are treated more successfully after the relapse.

Various authorities feel that this type of treatment is not altogether satisfactory. Kant (1944) criticizes the method on the grounds that it is a symptomatic treatment. It does not eliminate the underlying causes of maladjustment. What it does is to frustrate a pseudoadjustment by the inadequate means of alcohol. Carver (1949b) feels that the punitive and disgust factors in the treatment are all too obvious and that unless the underlying motivation is brought under control no permanent readjustment can be effected. Carlson (1949) states that success with this therapy appears to depend on the type of patient and the amount and kind of additional therapeutic measures employed. "If there is a proper selection of patients and if adequate psychotherapeutic measures are also employed, a good percentage of successful cures have been reported, but applying this therapy to alcoholics indiscriminately gives results as low as 15% cures."

Apparently the best type of patient to receive conditioned reflex therapy is the relatively stable person who has gradually become habituated to alcohol (i.e. the secondary addict) and who now wants help in breaking away from it. This treatment alone is of very little help to the true or primary addict.

The 50 to 60 per cent success in the case of selected patients, that is,

patients who really co-operate and want to get rid of the addiction, is not peculiar to this method. When a similar selection of patients is made, other therapies yield equivalent results.

The selectivity of the patients and the financial cost of the treatment preclude the use of this type of treatment on any large scale.

Benzedrine. Benzedrine has never been recommended as a cure for addiction. It has been used as an adjunct to whatever other treatment is given to the patient. Bloomberg (1941) states that benzedrine has proved useful in the handling of addiction in several different ways:

1. It effectively combats the depression and general malaise of acute hang-over.

2. It prevents withdrawal symptoms when abstinence is enforced.

3. Benzedrine gives an immediate perceptible effect and helps the patient over his initial feelings of hopelessness and hostility. Rapport between patient and therapist is thereby facilitated.

4. Since addicts are accustomed to solving their difficulties by ingesting something, it seems reasonable to them, therefore, that something they ingest should help them.

5. Benzedrine tends to smooth out mood swings and to give the patient a lift on his bad days.

By substituting benzedrine for alcohol in the habit pattern it may be that the therapist is creating an additional problem, particularly if it is used over a prolonged period of time.

Insulin. Insulin is used as an adjunct to other methods in the treatment of acute alcoholism. It acts on the liver to increase the storage of sugar in that organ and cuts down the sugar in the blood. It restores and stimulates appetite and is a tonic to the cells of the body.

The patient, after receiving a physical examination, is put to bed and given a sufficient dose of insulin (40-80 units) to produce in one and one half hours somnolence, thirst, and diaphoresis. The length of each treatment varies from two to three hours and is terminated by the oral administration of about eight ounces of fruit juice which contain an additional ounce of sugar. The patient is then quite hungry and enjoys the substantial meal which follows.

The number of these treatments varies with the individual case; one may be sufficient, some patients may require two, three, or four, and perhaps more than one treatment in the first 24 hours.

Tillim (1944) feels that insulin therapy has proved superior to other available methods for the treatment of acute alcoholism. It shortens the period of disability and is highly acceptable to patients.

It should be noted that insulin therapy is a treatment for acute alcoholism and not for alcohol addiction.

ACTH (Adrenocorticotrophic Hormone) and ACE (Adrenocortical

Extract). Smith (1950) conceives of alcoholism as a metabolic disease, and in line with the medical approach to this problem treated a number of chronic alcoholics and patients in acute alcoholic states with aqueous ACE and ACTH. He confines himself to the description of the results obtained in the treatment of three acute alcoholic states—Korsakoff's psychosis, acute alcohol intoxication, and delirium tremens. All of these patients received 25 mg. of ACTH intramuscularly every six hours around the clock for the treatment period. They received no other supportive measures or medication before or during the ACTH treatment period and sedation was withheld.

Two patients with Korsakoff's psychosis were treated with ACTH without clinical improvement. After 175 mg. of ACTH were administered without beneficial effect, one of these patients was given ACE in doses of 10 cc. intravenously every six hours for 36 hours. The patient improved markedly with this treatment within 24 hours.

ACE, used in 70 patients, and ACTH, used in 10 patients, were both effective in the treatment of acute alcohol intoxication. ACE has a much more prompt sedative effect than ACTH and it seems to abolish anorexia somewhat more quickly. ACTH abolishes sweating and visual hallucinations somewhat more promptly than ACE. Otherwise, from the clinical point of view, the two hormones give rather similar results.

ACE is probably preferable to ACTH in the treatment of acute alcohol intoxication because of its superior sedative action, and especially in the case of female alcoholics who are in the productive age and have not had the menopause.

Smith states that in evaluating the efficacy of treatment in delirium tremens it is important to bear in mind that the period of time over which recovery takes place is the cardinal consideration. With other treatments for this condition, the patient should get well within 48 to 72 hours. With ACTH, improvement is noticed within three to ten hours and the improvement is clinically more striking.

Several alcohol addicts are under treatment with ACTH, and although the drug, according to Smith, has been effective in abolishing their addictive behaviour, valid conclusions about the efficacy of this treatment cannot be formulated at the present time.

In summary, Smith states "it appears that whereas ACE is effective in Korsakoff's psychosis, ACTH is not; and that both ACE and ACTH are effective in the treatment of acute alcohol intoxication. In the latter condition, ACE is probably preferable because of its greater sedative action. In delirium tremens, ACTH is the most effective treatment used and is superior to either conventional treatment or ACE."

It appears that the use of these hormones in the treatment of alcoholism is still in the experimental stage and that little evaluation can presently be made as to their effectiveness. At present the most that can be said is that these hormones help the patient recover from the acute effects of overindulgence.

Antabuse. During the last two years, much has been heard about the new wonder drug antabuse. This is the Danish trade name for tetraethylthiuramdisulphide. Patients receiving this drug have an abnormal reaction to alcohol in the body. The drug itself has few effects when administered daily in doses of 0.5 gms. over a period of several months. However, it is much too early to assess the value of antabuse in the entire treatment of the alcohol addict.

Gelbman and Epstein (1949) of McGill University used antabuse on 55 addicts who were treated to obtain clinical data and to plan a series of whatever further studies might be indicated. Their method was as follows:

The patients had been instructed not to consume any alcohol for 48 hours before arriving. A medical history was obtained and a routine physical examination was done. In the presence of the person who accompanied him, each patient was given a brief talk about the treatment, and then swallowed four pills (0.5 gm. each). Each patient was given five pills to take home. He was instructed to take three pills on the following morning, two pills on the second morning, and to report back at 2 p.m. on the second afternoon for his "experience session." The "experience session" was held in groups of two to five patients. Each patient was allowed to drink at his usual rate. No one was urged to drink more than he desired.

Gelbman and Epstein report that the reaction of alcohol with antabuse occurred within two to fifteen minutes, or after two to six ounces of liquor, or before a quart of beer could be consumed. These authors, as well as Bell and Smith (1949) report the following symptoms:

Five to ten minutes after ingestion of moderate amounts of alcohol, the individual has a sensation of heat in the face which is accompanied by an intense flushing. The face, sclerae, upper limbs and chest become intensely red. At the same time, an intense pulsation is felt in the head and neck, sometimes accompanied by a throbbing headache. Most cases complain of slight constriction in the neck and some of subjective dyspnoea or more frequently of a mild irritation in the throat or trachea which results in slight coughing. These symptoms reach maximal intensity in approximately one half-hour after taking alcohol.

After larger doses of alcohol, nausea may begin thirty to sixty minutes after the onset of the cardiovascular symptoms and the intense flushing may be replaced by pallor. A considerable fall in blood pressure may occur. The nausea results in copious vomiting in some cases. Apart from these symptoms a general uneasiness

is felt which is very disagreeable to the patient. The intensity and duration of the symptoms depend on the dose of alcohol and the disposition of the individual.

In addition to these symptoms, subjective complaints were also expressed. These included warmth, dizziness, blurred vision, pressure on the top of the head, pounding headache, palpitations, difficulty in breathing, tightness in the throat, chest pain, numbness of the hands and feet, nausea and sleepiness. Almost every patient fell asleep for from one to three hours. As soon as the patient desired and seemed able to do so, he was permitted to go home. This usually depended upon the nature and the severity of the reaction. On leaving, the patient was given 15 pills, instructed to take one pill each morning, and to report back in two weeks for more pills.

When the patient returned each two weeks for more antabuse, he was given a chance to talk about his adjustment to abstinence and his desire for liquor. The problem of maintenance dosage has not been solved, but it is essential that antabuse be taken every day.

Certain results were observed. Of the total of 55 patients, 2 failed to return for the experience session. After the controlled experience of alcohol and antabuse, 4 failed to return. Of the remaining 49 patients, 4 were known to discontinue antabuse and to have reverted to their old drinking habits. Among the remaining 45, 4 have remained sober without taking more antabuse and 41 are taking the drug regularly.

Glud (1949) points out that antabuse is not a cure for alcohol addiction. The drug should be considered a helpful adjunct to treatment. He states that before antabuse became available, it was possible to keep some alcoholic patients sober through aversion treatments, Alcoholics Anonymous, or by other methods, especially psychotherapeutic. Antabuse, he says, seems to have improved the possibilities for the control of alcoholics.

Gelbman and Epstein believe that the emotional adjustments of alcoholics to treatment with antabuse fall into five broad groups:

1. A few in whom alcohol seems to be the only major field of difficulty. These people respond extremely well to antabuse therapy. Their adjustment appears so good that there is little need for psychotherapy.
2. Those who have an initial period of anxiety and recover with mild residual anxiety. These people make a satisfactory adaptation with support and guidance.
3. Those who react with anxiety and have more or less of a struggle to continue therapy. These people can also adjust with psychotherapy from a physician.

4. Those who are unable to carry on too successfully and will discontinue therapy and revert to their old drinking habits without deeper psychotherapy.

5. Those who are totally incapable of adjustment to sobriety. In spite of many promises and frequent attempts they will not faithfully continue therapy. These people obviously need intensive psychotherapy.

Carver (1949) recommends the use of antabuse as a useful ancillary but not as a substitute for general and psychological methods in the treatment of addiction. His view is that the drug of itself cannot rectify the defective personality structure of which addiction is a symptom, and unless the underlying motivations which prompted the addict to excess are adjusted, he cannot be regarded as cured. While antabuse may stop the excessive drinking, the neurotic tendencies still remain, and if their outlet through alcohol is denied them by a pharmacological barrier alone, they will find other and possibly more objectionable outlets.

The sole use of antabuse implies that the problem of alcohol addiction is alcohol. It has become apparent to those who employ the treatment (Carver, 1949b; Glud, 1949; Gelbman, 1949; Jacobson, 1949) that the drug is not a cure, but a powerful addition to the existing therapeutic armamentarium.

Alcoholics Anonymous

This organization is composed of a group of ex-alcohol addicts who are banded together for the express purpose of keeping one another sober. Its tenets and influence have spread throughout much of the world. There are at present about 3,500 groups and close to 100,000 members with varying lengths of sobriety.

A.A. has a religious side, but it emphasizes that alcohol addiction is a physical disease. The members consider the main cause of addiction to be emotional maladjustment. Their solution is a deep and effective spiritual experience which revolutionizes the whole attitude towards life. They believe that human aid is insufficient and that the defence against the crucial "first drink" can only come from a Higher Power. They also believe that the ex-addict is better equipped than anyone else to win the addict's confidence. They recommend hospital treatment before their psychological measures can be applied.

Alcoholics Anonymous is not a highly organized entity. The local groups are almost completely autonomous and there is no set pattern to which they must conform. A feature of the movement is its lack of rigid control and central authority. While there are no rigid rules of

control or ultimate authority, there are nevertheless certain general "Traditions of Relations" which broadly outline the functions of the individual group.

In addition to the local groups, there are the following units:

1. Alcoholic Foundation, which administers the national affairs of Alcoholics Anonymous. It is composed of nine trustees, five of which are non-addicts while four are members of A.A.

2. Central Office. This is the clearing house for all A.A. groups. It distributes literature, answers letters of inquiry, and renders other various services to the local groups.

3. Works Publishing Company. This is owned by the Alcoholic Foundation and does the printing for all the groups.

4. The Alcoholics Anonymous Grapevine. This is the newspaper of Alcoholics Anonymous and is the medium of expression for the members of the movement.

5. District Offices. These are organized to serve as clearing-houses for all A.A. groups in a given area. They distribute literature, establish contacts between inquiring addicts and groups, and make arrangements for sponsors and hospitalization.

6. Central Committees. These are made up of representatives from each group in a given area and function in an advisory capacity.

7. Clubs. These serve as recreational and social centres for A.A. members.

8. Auxiliaries. Membership of these units comprises the non-addicted relatives of A.A. members. By education they are given some insight into the problems of the addicted member of their family.

Since there are no dues or fees in Alcoholics Anonymous, the general practice is to raise money through the voluntary contributions of members. This is done by passing the hat at each meeting. Funds collected in this manner are used to defray the expenses of the local group and to contribute biannually to the support of the Central Office.

When an addict appeals to A.A. for help, he is very often in need of medical attention. Medical treatment recommended by A.A. consists of sobering up the individual, and giving him some immediate relief from the unpleasant symptoms of excessive intake of alcohol. Physical disturbances are determined and remedied, and his dietary deficiencies are corrected.

During this temporary period of abstinence and freedom from craving, A.A. members talk with the patient. Only A.A. members may visit him, for they can speak his language and establish rapport with him. Personal experiences are recited and the patient soon recognizes that they understand his position and are sincerely desirous of helping

him. This often leads to the point where he is willing to accept the A.A. programme. When he is discharged and under the guidance of his sponsor, he may soon attend his first meeting.

Meetings are generally of two types, the open and the closed. At the open meetings, the member's friends and family are permitted to attend as well as outsiders who are interested in A.A.

In the closed meetings members' more intimate problems are discussed. At these closed meetings, members are uninhibited by the presence of outsiders. Thus they may give expression to deep emotional problems, which relieves them of guilt feelings. The freedom of interaction and communication facilitates the exchange of ideas and sentiments. It is a powerful factor in the development of security. It leads to mutual understanding, to identification, and to fellowship.

Every member of A.A. is firmly impressed with the fact that alcohol addiction is an illness and that as an addict he is a sick man. By accepting the view that he is sick, that his drinking is a manifestation of a deep-seated compulsion, the addict is relieved to some extent of moral responsibility for his past drinking behaviour. By way of explaining the illness, A.A. draws a comparison between addiction and allergy or diabetes mellitus. It says that as the diabetic must give up sugar, so must the alcoholic abstain from alcohol. This comparison, inaccurate as it may be, seems to give the alcoholic a sense of satisfaction because his behaviour is at least seen in a new light.

When the addict accepts the concept that alcohol addiction is an illness, his drinking is taken out of the category of immoral behaviour. He is able to regard his past behaviour as an outgrowth of his malady. He is assured that he is entering into a new stage of life. In this new beginning he has the advantage of frequent contact with and support of other members of the group. This gives him a feeling of security.

The great majority of A.A. members regard the spiritual factor as the core of the movement. The therapeutic effectiveness of A.A. comes from its use of an emotional force to attack the narcissistic attitude of the addict. This force serves to neutralize the egocentric elements in the personality of the addict. While this feature of the programme is accepted by the majority of the members, it is nevertheless subject to a variety of interpretations, each member having his own concept of a "power greater than myself." Through this spirituality he renounces his feelings of resentment and he begins to develop a new state of mind. He becomes more objective about himself and his problem. He begins to verbalize about his drinking experiences, and this, he finds, is a means of alleviating tension-creating feelings.

At a regular meeting the member tells of behaviour which if kept

within himself, might lead to feelings of guilt or remorse. By reciting these experiences he achieves a catharsis which relaxes tensions, guilt feelings, and other conflicts. By sharing his experiences, he is able to maintain and reinforce his feelings of security. This is accomplished by continually bringing to the surface the repressed memories of his alcoholic behaviour, and can also bring to light the more deeply buried attitudes which exert their influences on behaviour.

Working with the other addicts is an essential factor in the maintenance of sobriety. By helping another addict to recover, therapeutic gains are realized by the sponsor as well as by the object of his efforts. His preoccupation with another person tends to make the sponsor less egocentred. The fact that he is responsible for another serves to stabilize his own thoughts and actions.

Despite long periods of sobriety which have been enjoyed by numerous members of A.A., there are many who return to drink. Perhaps those who relapse have not followed very closely the A.A. precepts for living without alcohol. In accepting A.A. tenets they may have made certain personal reservations and doing this, according to A.A., usually leads to subsequent "binges." Many addicts harbour the illusion that some day they will be able to drink moderately. Testing this illusion usually leads to a "slip," the surest safeguard against which is for the addict to adhere closely to the A.A. programme as outlined in the "Twelve Steps."

The thought of going without a drink for the rest of his life is usually terrifying and anxiety-producing to the addict. It is believed that, with many addicts, the tensions which arise out of such a determination often lead directly to failure. Those who go "on the wagon" for a stated period of time, find, too, that the emotional tensions are so great that the end of their period of sobriety is usually the signal for a bigger and better "binge."

For these reasons, A.A. has fashioned the 24-Hour Plan. Using this technique, the addict strives for but 24 hours of abstinence. Addicts are of the opinion that this plan facilitates abstinence—that anyone can stay dry for 24 hours. The idea is to live only for today, tomorrow never comes, and yesterday is past.

The basis of the programme of recovery from which Alcoholics Anonymous has evolved is known as the "Twelve Steps." These are as follows:

1. We admitted we were powerless over alcohol—that our lives had become unmanageable.
2. Came to believe that a power greater than ourselves could restore us to sanity.

3. Made a decision to turn our will and our lives over to the care of God as we understood Him.

4. Made a searching and fearless moral inventory of ourselves.

5. Admitted to God, to ourselves, and to the other human beings the exact nature of our wrongs.

6. Were entirely ready to have God remove all these defects of character.

7. Humbly asked Him to remove our shortcomings.

8. Made a list of all persons we had harmed, and became willing to make amends to them all.

9. Made direct amends to such people whenever possible, except when to do so would injure them or others.

10. Continued to take personal inventory and when we were wrong promptly admitted it.

11. Sought through prayer and meditation to improve our conscious contact with God as we understood Him, praying only for knowledge of His will for us and the power to carry that out.

12. Having had a spiritual experience as a result of these steps, we tried to carry this message to alcoholics and to practise these principles in all our affairs.

These Twelve Steps appear to be based upon a rather profound understanding of the addict's personality. It is felt, despite most reports to the contrary, that there are certain common qualities which are regularly present in addicts excepting those who have a frank underlying personality disorder.

Tiebout (1943) believes that characteristic of the hypothetical typical addict is a "narcissistic egocentric core, dominated by feelings of omnipotence, intent on maintaining at all costs its inner integrity." He feels that while these characteristics are found in other maladjustments, they appear in relatively pure culture in addict after addict.

If the addict can accept the concept of a power greater than himself, he modifies at least temporarily and possibly permanently his deepest personality structure. When he does so without resentment or struggle, then he is no longer typically an addict. If the addict can sustain that inner feeling of acceptance he may remain sober for the rest of his life.

One of the founders of A.A. states that the success of the group with any addict depends upon the degree to which the individual goes through a spiritual conversion. His own experience was of a "sweeping cataclysmic type" which transported him from the depths of depression to a peak of ecstatic joy where he remained for some hours. This state was followed by a feeling of serenity and confidence

that he was free of his compulsion. He states that about 10 per cent have this experience, a religious or spiritual awakening is the act of giving up one's reliance on one's omnipotence.

Tiebout feels that the therapeutic value of the A.A. approach arises from its use of a religious or spiritual force to attack the fundamental narcissism of the alcohol addict. When this narcissistic component is uprooted, the individual experiences a whole new series of values and attitudes which are of a positive nature, and which impel him in the direction of growth and maturity. The use of an emotional force, religion, results in the overthrowing of a negative hostile set of emotions, supplanting them with a positive set in which the individual need no longer maintain his defiant individuality but instead can live in harmony with his environment. When this mental state is achieved, the individual is no longer literally "driven to drink."

Bales (1944) emphasizes the therapeutic value of the insight gained by the addict through the medium of the group discussions which take place at A.A. meetings. "The alcoholic who has been to a few Alcoholics Anonymous meetings finds it much harder to fool himself about the nature and significance of his drinking than he has in the past. He finds it easier to expose those defences which have only been half conscious, because by doing so he qualifies himself as a real bona-fide member of the group . . . he finds that his inner defences against a rational and even a moral attack on his drinking are gradually fading out."

Alcoholics Anonymous estimates as high as 75 per cent cures for those who really try their programme of recovery. When considering these rather impressive results it is well to remember that there is a factor of selection at work, for A.A. membership is limited to those who will really co-operate and want to get rid of their addiction. Chances are, given a similar favourable sample of subjects, other therapies would yield equivalent results. Not all types of addicts are likely to respond to A.A. treatment. For example, in cases where drinking is symptomatic, A.A. therapy will probably not be beneficial; in fact it may even be harmful in that it may serve to direct the focus of attention away from the basic disorder.

Despite these limitations, A.A. offers one of the most economical therapies in use today and perhaps one of the most successful. The job of attacking addictive drinking through social and religious means is a job for which Alcoholics Anonymous is particularly fitted. It seems to do this job more economically, effectively, and dependably than any other therapeutic agency for which statistics are available.

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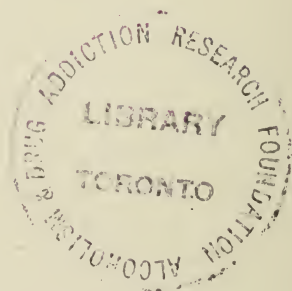
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